AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A nitride semiconductor product comprising an n-type layer, a light-emitting layer, and a p-type layer which are formed of a nitride semiconductor and sequentially stacked on a substrate in the above order,

said light-emitting layer having a quantum well structure in which a well layer is sandwiched by barrier layers having band gaps wider than the band gap of the well layer,

wherein ~~each~~ said barrier ~~layer comprises~~layers individually comprise a barrier sublayer C which has been grown at a temperature higher than a growth temperature of said well layer, and a barrier sublayer E which has been grown at a temperature lower than a growth temperature of said barrier sublayer C, the difference between the growth temperature of said barrier sublayer C and the growth temperature of said barrier sublayer E is 50°C or more, said barrier sublayer E is grown by maintaining the lowered growth temperature after lowering the temperature, and said barrier sublayer C is disposed closer to said substrate with respect to said barrier sublayer E.

2. (original): A nitride semiconductor product according to claim 1, wherein the nitride semiconductor is represented by formula

$In_xAl_yGa_{1-x-y}N$ ($0 \leq x < 1$, $0 \leq y < 1$, $0 \leq x + y < 1$).

3. (previously presented): A nitride semiconductor product according to claim 1, wherein one or more of said barrier layers further comprise a barrier sublayer A which has been

grown at a temperature lower than a growth temperature of said barrier sublayer C, and said barrier sublayers A, C, and E are stacked, in this order.

4. (original): A nitride semiconductor product according to claim 3, wherein one or more of said barrier layers comprise a barrier sublayer B which has been grown at a temperature lower than a growth temperature of said barrier sublayer C, said barrier sublayer B intervening between said barrier sublayers A and C.

5. (previously presented): A nitride semiconductor product according to claim 1, wherein one or more of said barrier layers comprise a barrier sublayer D which has been grown at a temperature lower than a growth temperature of said barrier sublayer C, said barrier sublayer D intervening between said barrier sublayers C and E.

6. (previously presented): A nitride semiconductor product according to claim 1, wherein the difference between the growth temperature of said barrier sublayer C and the growth temperature of said well layer is 50°C or more.

7. (canceled).

8. (previously presented): A nitride semiconductor product according to claim 3, wherein the difference between the growth temperature of said barrier sublayer C and the growth temperature of said barrier sublayer A is 50°C or more.

9. (previously presented): A nitride semiconductor product according to claim 1, wherein the growth temperature of said well layer falls within a range of 600°C to 1,000°C.

10. (previously presented): A nitride semiconductor product according to claim 2, wherein said well layer comprises GaInN.

11. (previously presented): A nitride semiconductor product according to claim 2, wherein said barrier layer comprises GaInN or GaN.

12. (previously presented): A nitride semiconductor product according to claim 1, wherein at least one layer selected from said well layer and said barrier layer contains an n-type dopant.

13. (currently amended): A nitride semiconductor product according to claim 12, wherein said n-type dopant is ~~an~~ Si.

14. (currently amended): A nitride semiconductor product according to claim 12, wherein said n-type dopant is ~~a~~ Ge.

15. (currently amended): A nitride semiconductor product according to claim 12, wherein a concentration of said n-type dopant in ~~at least one layer selected from said well layer and said barrier layer~~the layer containing said n-type dopant varies periodically.

16. (currently amended): A nitride semiconductor product according to claim 15, wherein a layer ~~containing said n-type dopant and an undoped layer are stacked alternately~~with a lower concentration of said n-type dopant is an undoped layer, in the layer containing said n-type dopant.

17. (currently amended): A nitride semiconductor product according to claim 15, wherein ~~a higher layer at the concentration of said n-type dopant is not thicker than a lower layer~~a layer with a higher concentration of said n-type dopant is not thicker than a layer with a lower concentration of said n-type dopant, in the layer containing said n-type dopant.

18. (previously presented): A nitride semiconductor product according to claim 12, wherein the layer containing said n-type dopant has an n-type dopant concentration of 1×10^{16} to 5×10^{19} cm^{-3}.

19. (previously presented): A nitride semiconductor light-emitting device comprising a nitride semiconductor product according to claim 1, a negative electrode provided on an n-type

layer of said nitride semiconductor product and a positive electrode provided on a p-type layer of said nitride semiconductor product.

20. (previously presented): A light-emitting diode comprising a nitride semiconductor product according to claim 1.

21. (previously presented): A laser device comprising a nitride semiconductor product according to claim 1.

22. (previously presented): A lamp comprising a nitride semiconductor product according to claim 1.

23. (currently amended): A method for producing a nitride semiconductor product, said method comprising sequentially stacking on a substrate a nitride semiconductor n-type layer, a nitride semiconductor light-emitting layer of a quantum well structure, and a nitride semiconductor p-type layer, thereby producing a nitride semiconductor product having a quantum well structure, wherein said method comprises

growing a well layer;

subsequently, elevating a growth temperature;

growing a barrier layer of the quantum well structure at the elevated temperature, which is higher than a growth temperature of the well layer by 50°C or more;

subsequently, lowering the growth temperature again by 50°C or more; and

further growing the barrier layer at the lowered temperature.

24. (original): A method for producing a nitride semiconductor product according to claim 23, which further comprises growing said barrier layer before elevating the growth temperature.

25. (previously presented): A method for producing a nitride semiconductor product according to claim 23, wherein growing of said barrier layer is performed in at least one step of elevating the growth temperature and lowering the growth temperature.

26. (previously presented): A method for producing a nitride semiconductor product according to claim 23, wherein said barrier layer contains an n-type dopant.

27. (previously presented): A method for producing a nitride semiconductor light-emitting device, said method comprising

a step of removing a portion of a light-emitting layer and a p-type layer of a nitride semiconductor product according to claim 1, thereby exposing an n-type layer,

a step of providing a negative electrode on the exposed n-type layer, and

a step of providing a positive electrode on the p-type layer.

28. (original): A method for producing a light-emitting diode, comprising a step of providing a lead to a nitride semiconductor light-emitting device according to claim 19.

29. (original): A method for producing a laser device, comprising a step of providing a lead to a nitride semiconductor light-emitting device according to claim 19.

30. (original): A method for producing a lamp, comprising a step of providing a cover containing a phosphor to a nitride semiconductor light-emitting device according to claim 19.